127. A New Trematode Worm of the Family Acanthostomidae.

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Paraisocoelium exorchis gen. et sp. nov.

This species is the second form of Acanthomidae which are found in the intestine of *Uranoscopus japonicus* Houttuyn, having some remarkable resemblances to *Isocoelium mediolecithale* Ozaki 1927.

The body considerably elongated, measuring in well-extended specimens 4.4–5.3 by 0.8–0.95 mm., the greatest breadth being of the level of the ovary. The cuticle is entirely covered with small spines and devoid of any cephalic armature. The oral sucker is subterminal, measuring 0.3 × 0.23 mm. The pharynx is close behind the oral sucker, measuring 0.1–0.13 mm. in diameter. The esophagus measures 0.14 mm. in length; the intestinal bifurcation takes place about midway between the pharynx and the acetabulum. The intestinal caeca are slender uniform canals and terminate blindly at a distance of 0.8–1 mm. from the posterior end of the body. The acetabulum is small and is situated at one quarter of the body length from the anterior end of the body, measuring 0.13 mm. in diameter.

The testes are situated on the outside of the intestinal caeca in the anterior part of the last third of the body. They are not symmetrical in position, the left one advancing anteriorly about its own diameter. They are oval in shape and measure 0.33–0.45 × 0.2–0.25 mm. Vasa efferentia arise from these and pass anteriorly along the inner side of the caeca and meet at some distance anterior of the ovary to form a vesicula seminalis. The vesicula seninalis is a winding canal filled with spermatozoa lying on the dorsal side of the body. There are no cirrus and cirrus pouch; the ductus ejaculatorius is thin-walled and runs almost straight to the genital sinus. The pars prostatica is not differentiated, though a few prostatic cells are present around the distal part of the vesicle. The genital aperture lies on the median line immediately in front of the acetabulum.

The ovary is situated in the middle of the body and is composed of 18–23 deeply indented ovoid lobes, of which the central large one

on the dorsal side gives rise to the oviduct. Close to its origin it gives off the receptacular duct, and after receiving the yolk reservoir it forms an ootype and then turns on itself to the ventral side. The receptaculum seminis is of large size and lies in the median line on the dorsal side of the body. The Laurer's canal arise from the receptoculum seminis near the oviduct and runs posteriad to open on the dorsal surface. The shell glands or glands of Mehlis, lie in the median line anterior to the ovary. The uterus passes caudad from the shell gland, describing transverse loops on the ventral side of the left intestinal caecum until it reaches to the posterior testis then it crosses to the right and turns cephalad. The ascending limb likewise forms transverse loops on the right side until it reaches to the anterior level of the ovary. Passing the ovarian zone, the uterus forms full, side-to-side windings between the caeca overlapping them, and ends as a metraterm opening into the gentital sinus. The small follicles of the vitellaria are massed in grape-like bunches, there being from 4 to 7 of these bunches on either side. They lie on the dorsal side of the intestine and extend from the acetabular level to the ovary. On the right side, in some specimens there are some additional bunches in the ovarian zone. The eggs are yellowish brown in colour, measuring 0.016–0.018 × 0.009–0.01 mm.

The excretory vesicle is of the Y-shaped type. The main stem extends from the posterior end of the body to near the anterior level of the anterior testis, where it bifurcates into two paired specious limbs running forwards to the level of the pharynx.

This species appears to be more closely related to the genus *Isocoelium*, found in the same host, than to any other genera of the family Acanthostomidae, but excluded from the latter differing in the distribution of the vitellaria and in the position of the testes. In this genus the vitellaria are arranged in two lines on the dorsal side of the caeca and limited to the anterior part of the ovary while in *Isocoelium* they are arranged in one line in the median line and divided into two groups, one in front of the ovary and the other behind. In the position of the testes, they are exocaecal in this genus and intercaecal in *Isocoelium*.

Generic diagnosis.—Acanthostomidae: slender worms, flattened dorsoventrally and bluntly pointed at both extremities. Cuticle with spines. Acetabulum small, preequatorial. Oral sucker large, subterminal, esophagus long and slender; Intestinal caeca symmetical, reaching nearly to the posterior end of the body. Genital pore

preacetabular, in mid-ventral line. Testes exocaecal, postuterine, near posterior end; cirrus and cirrus pouch absent. Ovary in uterine zone, postacetabular, pretesticular, in the middle of the body. Receptaculum seminis and Laurer's canal present. Uterus transversely coiled, with descending and ascending limbs, extending between acetabulum and testes. Vitellaria in two line, under the dorsal surface, extending from acetabulum to ovarian zone. Excretory vesicle roomy, long, Y-shaped.

Type species. *Paraisocoelium exorchis.*

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Explanation of Figures.

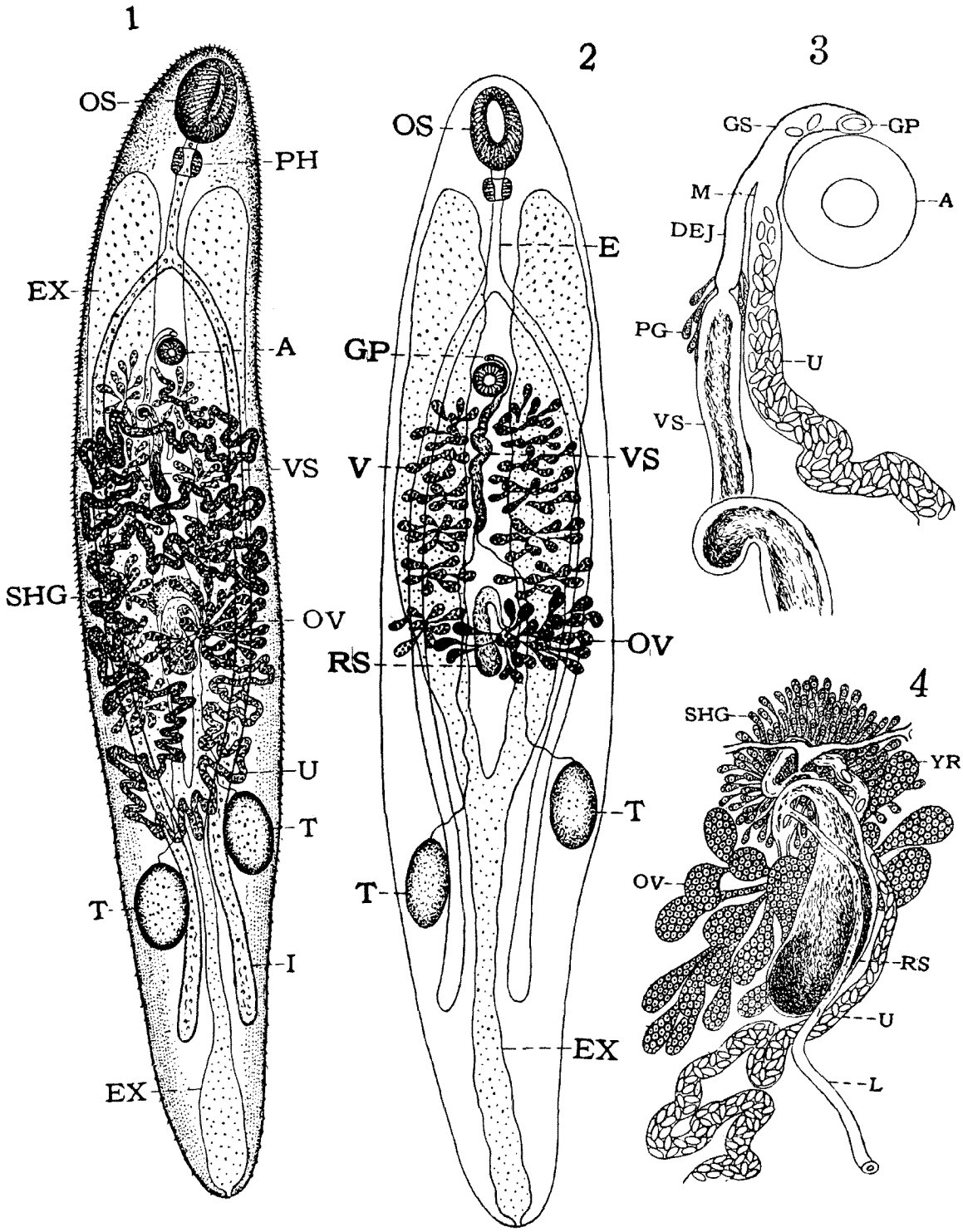
Fig. 1. *Paraisocoelium exorchis*, ventral view.

Fig. 2. *Paraisocoelium exorchis*, ventral view, uterus omitted.

Fig. 3. *Paraisocoelium exorchis*, end apparatus of the reproductive organs, ventral view.

Fig. 4. *Paraisocoelium exorchis*, shell gland complex, dorsal view.

A	Acetabulum	PG	Prostate gland cell
DEJ	Ductus ejaculatorius	PH	Pharynx
EX	Excretory vesicle	RS	Receptaculum seminis
GP	Genital pore	SHG	Shell gland
GS	Genital sinus	T	Testis
I	Intestinal caecum	U	Uterus
L	Laurer's canal	V	Vitellarium
M	Metraterm	VS	Vesicula seminalis
OS	Oral sucker	YR	Yolk reservoir
OV	Ovary		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